

HALLIBURTON

iCem[®] Service

Laramie Energy LLC

United States of America, COLORADO

For: Laramie

Date: Friday, July 06, 2018

CASCADE CREEK 697-03-15W Surface PJR

API #: 05-045-23802

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

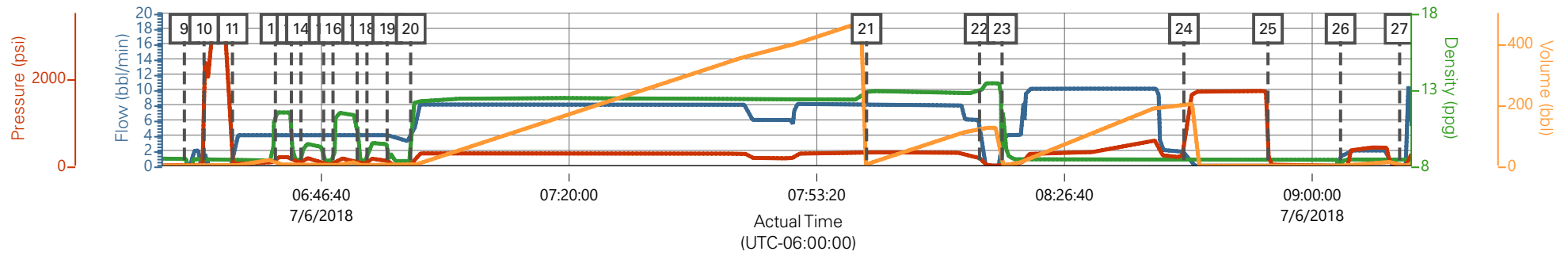
2.1 Job Event Log

| Type | Seq. No. | Graph Label | Date | Time | Source | Comb Pump Rate (bbl/min) | DH Density (ppg) | PS Pump Press (psi) | Pump Stg Tot (bbl) | Comments |
|-------|----------|---------------------------------------|----------|----------|--------|-----------------------------|---------------------|------------------------|-----------------------|---|
| Event | 1 | Call Out | 7/6/2018 | 00:00:00 | USER | | | | | REQUESTED ON LOCATION 7/6/18 @ 07:00 |
| Event | 2 | Depart Yard Safety Meeting | 7/6/2018 | 02:25:00 | USER | | | | | JSA COMPLETED |
| Event | 3 | Crew Leave Shop | 7/6/2018 | 02:30:00 | USER | | | | | |
| Event | 4 | Arrive At Loc | 7/6/2018 | 05:00:00 | USER | | | | | RIG RUNNING CASING |
| Event | 5 | Assessment Of Location Safety Meeting | 7/6/2018 | 05:05:00 | USER | | | | | JSA COMPLETED |
| Event | 6 | Pre-Rig Up Safety Meeting | 7/6/2018 | 05:10:00 | USER | | | | | JSA COMPLETED |
| Event | 7 | Rig-Up Equipment | 7/6/2018 | 05:15:00 | USER | | | | | |
| Event | 8 | Pre-Job Safety Meeting | 7/6/2018 | 06:00:00 | USER | 0.00 | 8.47 | 3.00 | 0.00 | JSA COMPLETED |
| Event | 9 | Start Job | 7/6/2018 | 06:28:14 | COM4 | 0.00 | 8.48 | -3.00 | 0.00 | 9 5/8"-36# CASING IN 14 3/4" OH, TD 2583', TP 2573', ST 44.3', WATER TEMP 65, PH 7, CHLORIDES 0 |
| Event | 10 | Test Lines | 7/6/2018 | 06:30:53 | COM4 | | | 3000.00 | | TEST LINES TO 3000 PSI |
| Event | 11 | Pump Spacer 1 | 7/6/2018 | 06:34:42 | COM4 | 4.00 | 8.33 | 29.00 | 20.00 | 20 BBL FRESH WATER |
| Event | 12 | Pump Spacer 2 | 7/6/2018 | 06:40:29 | COM4 | 4.00 | 10.00 | 168.00 | 10.00 | 10 BBL SUPERFLUSH |
| Event | 13 | Pump Spacer 1 | 7/6/2018 | 06:42:38 | COM4 | 4.00 | 8.33 | 194.00 | 5.00 | 5 BBL FRESH WATER |
| Event | 14 | Pump Spacer 2 | 7/6/2018 | 06:43:55 | COM4 | 4.00 | 8.40 | 61.00 | 10.00 | 10 BBL CACL SPACER |
| Event | 15 | Pump Spacer 1 | 7/6/2018 | 06:46:58 | COM4 | 4.00 | 8.33 | 39.00 | 5.00 | 5 BBL FRESH WATER |

| | | | | | | | | | | |
|-------|----|---------------------|----------|----------|------|-------|-------|--------|--------|--|
| Event | 16 | Pump Spacer 2 | 7/6/2018 | 06:48:14 | COM4 | 4.00 | 10.00 | 22.00 | 10.00 | 10 BBL SUPERFLUSH |
| Event | 17 | Pump Spacer 1 | 7/6/2018 | 06:51:29 | COM4 | 4.00 | 8.33 | 78.00 | 5.00 | 5 BBL FRESH WATER |
| Event | 18 | Pump Spacer 2 | 7/6/2018 | 06:52:48 | COM4 | 4.00 | 8.40 | 41.00 | 10.00 | 10 BBL CACL SPACER |
| Event | 19 | Pump Spacer 1 | 7/6/2018 | 06:55:31 | COM4 | 4.00 | 8.33 | 123.00 | 10.00 | 10 BBL FRESH WATER |
| Event | 20 | Pump Lead Cement | 7/6/2018 | 06:58:41 | COM4 | 8.00 | 12.30 | 280.00 | 428.40 | 428.4 BBL LEAD CEMENT, 1015 SKS @ 12.3 PPG / 2.37 YLD / 13.74 GAL/SK |
| Event | 21 | Pump Tail Cement | 7/6/2018 | 08:00:02 | COM4 | 8.00 | 12.80 | 300.00 | 109.70 | 109.7 BBL TAIL CEMENT, 292 SKS @ 12.8 PPG / 2.11 YLD / 11.75 GAL/SK |
| Event | 22 | Drop Top Plug | 7/6/2018 | 08:15:14 | COM4 | | | | | PLUG AWAY |
| Event | 23 | Pump Displacement | 7/6/2018 | 08:18:16 | COM4 | 10.00 | 8.33 | 580.00 | 195.50 | 195.5 BBL FRESH WATER DISPLACEMENT |
| Event | 24 | Bump Plug | 7/6/2018 | 08:42:44 | COM4 | 2.00 | 8.33 | 190.00 | 195.50 | PLUG BUMPED AT CALCUALTED DISPLACEMENT, FINAL CIRCULATING PRESSURE 190 PSI BROUGHT TO 1600 PSI FOR 10 MINUTE CASING TEST |
| Event | 25 | Check Floats | 7/6/2018 | 08:54:03 | COM4 | | | | | FLOATS HELD, 1.5 BBL BACK TO PUMP |
| Event | 26 | Clear Parasite Line | 7/6/2018 | 09:03:49 | COM4 | 2.00 | 8.33 | 400.00 | 12.00 | 12 BBL SUGAR WATER PUMPED THROUGH PARASITE, 2 BBL/MIN @ 400 PSI |
| Event | 27 | End Job | 7/6/2018 | 09:11:46 | COM4 | | | | | PIPE LEFT STATIC, NO RETURNS THROUGHOUT, 10# SUGAR, 1000# CaCl, 20 BBLS SUPERFLUSH USED |
| Event | 28 | Start Job | 7/6/2018 | 13:24:26 | COM4 | | | | | START TOP OUT |

| | | | | | | | | | | |
|-------|----|--------------------------------|----------|----------|------|------|-------|-------|-------|--|
| Event | 29 | Pump Cement | 7/6/2018 | 13:29:15 | COM4 | 2.00 | 15.60 | 70.00 | 23.50 | 23.5 BBLS TOPOUT, 111 SKS @ 15.6 PPG / 1.19 YLD / 5.24 GAL/SK |
| Event | 30 | End Job | 7/6/2018 | 13:44:00 | COM4 | | | | | CEMENT TO SURFACE, 50# CaCl AND 9 BBL SUPER FLUSH USED ON TOPOUT, TOTAL: 1050# CaCl, 29 BBLS SUPERFLUSH, 111 SKS TOPOUT |
| Event | 31 | Pre-Rig Down Safety Meeting | 7/6/2018 | 14:15:00 | USER | | | | | JSA COMPLETED |
| Event | 32 | Rig-Down Equipment | 7/6/2018 | 14:20:00 | USER | | | | | |
| Event | 33 | Pre-Convoy Safety Meeting | 7/6/2018 | 14:55:00 | USER | | | | | JSA COMPLETED |
| Event | 34 | Crew Leave Location | 7/6/2018 | 15:00:00 | USER | | | | | THANK YOU FOR CHOOSING HALLIBURTON CEMENTING OF GRAND JUNCTION, CO - RYAN MARTIN AND CREW |

LARAMIE - CASCADE CREEK 697-03-15W - 9 5/8" SURFACE CASING



Comb Pump Rate (bbl/min) 0 DH Density (ppg) 8.4 PS Pump Press (psi) 8 Pump Stg Tot (bbl) 8.4

| Description | Actual Time (UTC-06:00:00) | Comb Pump Rate (bbl/min) | DH Density (ppg) | PS Pump Press (psi) | Pump Stg Tot (bbl) |
|------------------------|-------------------------------|--------------------------|------------------|---------------------|--------------------|
| 9 Start Job | 06:28:14 | 0.00 | 8.48 | -3.00 | 0.00 |
| 10 Test Lines | 06:30:53 | 0.00 | 8.45 | 17.00 | 2.00 |
| 11 Pump Spacer 1 | 06:34:42 | 0.00 | 8.45 | 29.00 | 2.10 |
| 12 Pump Spacer 2 | 06:40:29 | 4.00 | 11.49 | 168.00 | 0.00 |
| 13 Pump Spacer 1 | 06:42:38 | 4.00 | 11.50 | 194.00 | 0.00 |
| 14 Pump Spacer 2 | 06:43:55 | 4.00 | 8.36 | 61.00 | 5.20 |
| 15 Pump Spacer 1 | 06:46:58 | 4.00 | 8.24 | 39.00 | 0.00 |
| 16 Pump Spacer 2 | 06:48:14 | 4.00 | 8.32 | 22.00 | 5.10 |
| 17 Pump Spacer 1 | 06:51:29 | 4.00 | 10.61 | 78.00 | 0.00 |
| 18 Pump Spacer 2 | 06:52:48 | 4.00 | 8.32 | 41.00 | 0.00 |
| 19 Pump Spacer 1 | 06:55:31 | 4.00 | 9.39 | 123.00 | 10.90 |
| 20 Pump Lead Cement | 06:58:41 | 3.80 | 8.31 | 10.00 | 0.60 |
| 21 Pump Tail Cement | 08:00:02 | 8.00 | 12.84 | 302.00 | 4.90 |
| 22 Drop Top Plug | 08:15:14 | 6.00 | 12.94 | 184.00 | 122.20 |
| 23 Pump Displacement | 08:18:16 | 2.30 | 7.73 | 17.00 | 0.50 |
| 24 Bump Plug | 08:42:44 | 1.00 | 8.39 | 541.00 | 201.50 |
| 25 Check Floats | 08:54:03 | 0.00 | 8.43 | 510.00 | 0.00 |
| 26 Clear Parasite Line | 09:03:49 | 0.90 | 7.62 | -9.00 | 0.00 |
| 27 End Job | 09:11:46 | 0.00 | 8.40 | -7.00 | 0.00 |

▼ HALLIBURTON | iCem® Service

Created: 2018-07-06 05:17:43, (UTC-06:00), Version: 4.5.139

Edit

Customer : Laramie Energy LLC

Job Date : 7/6/2018

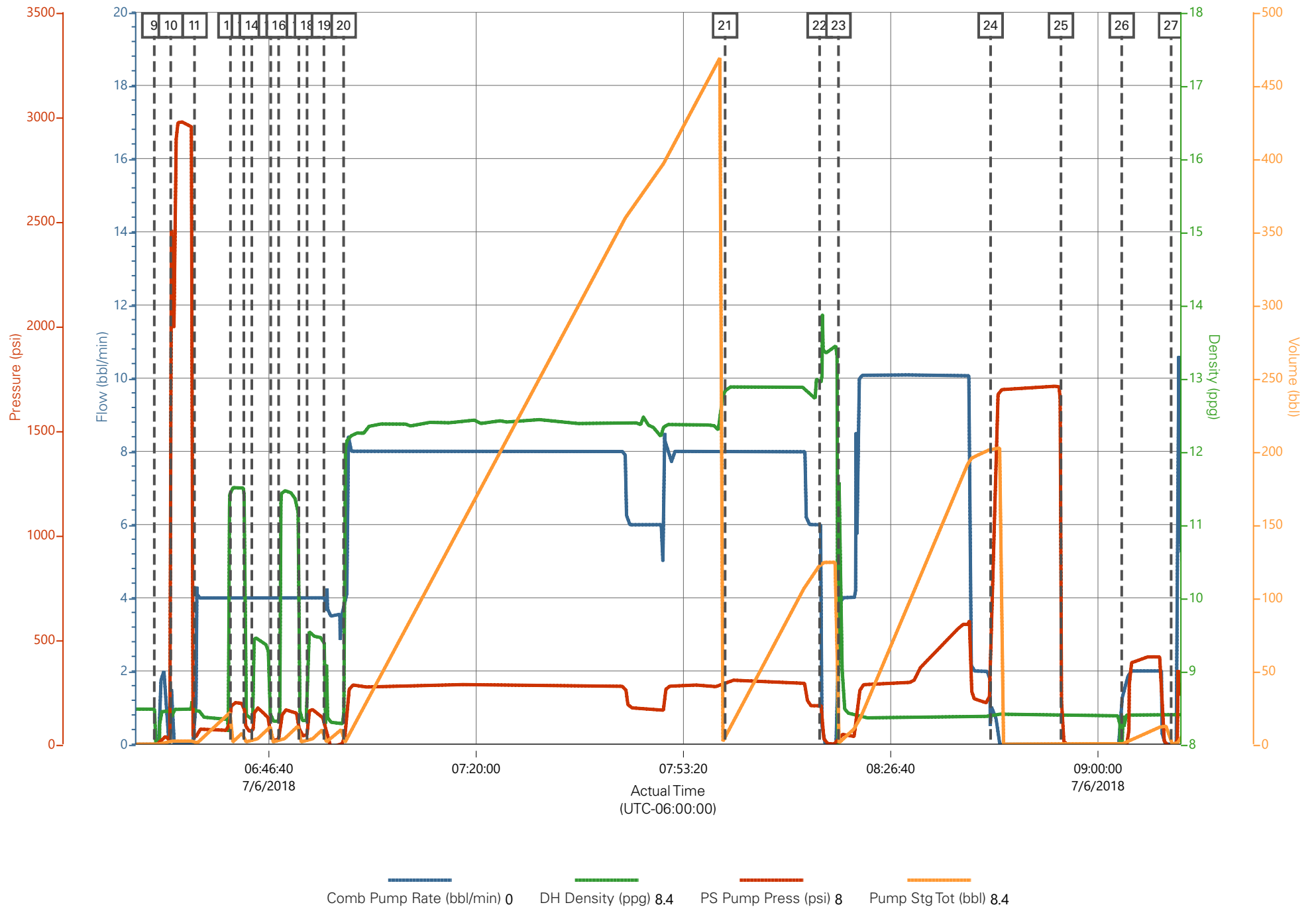
Well : CASCADE CREEK

Representative : MATT SETTLES

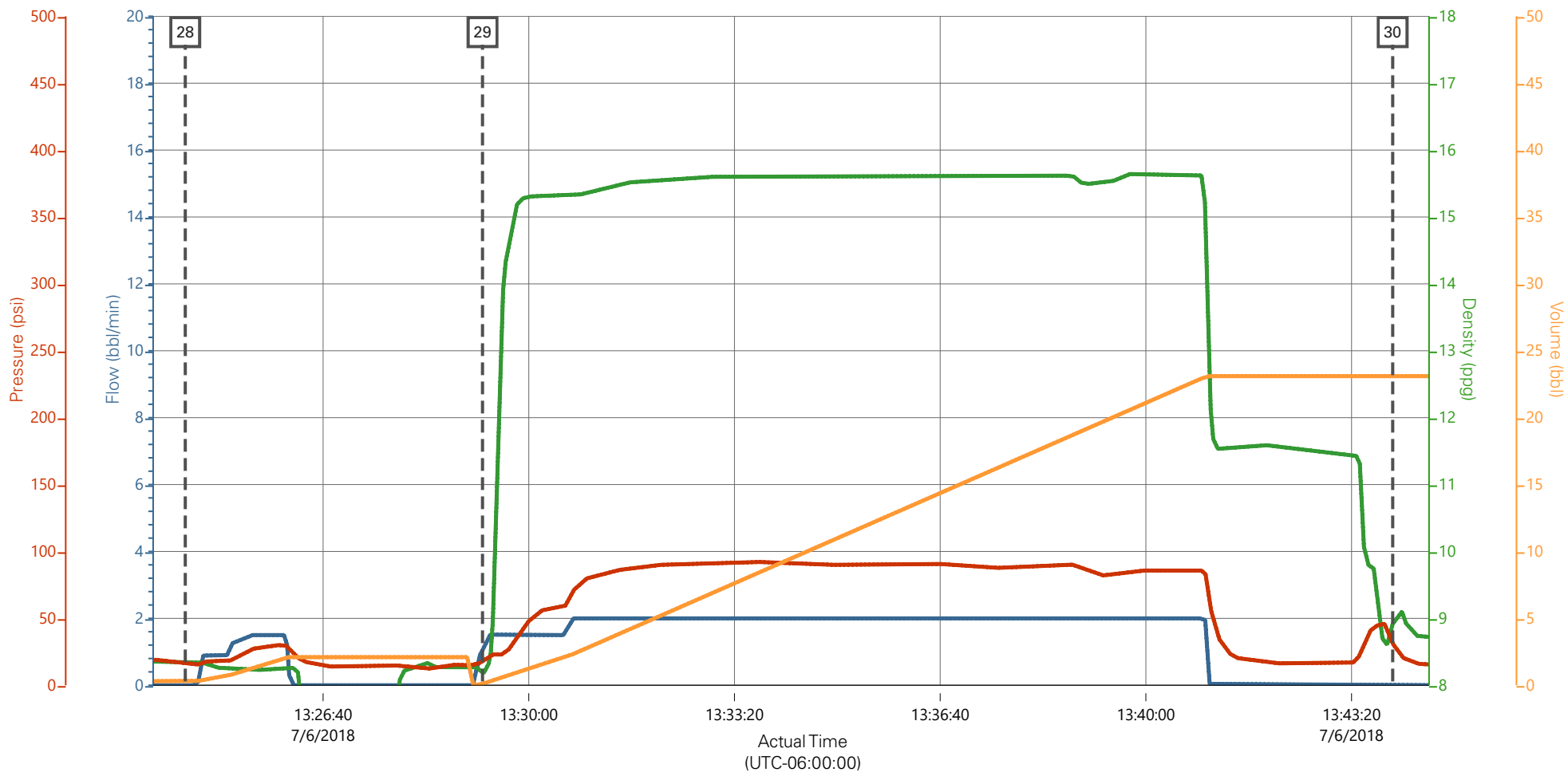
Sales Order # : 904971529

ELITE #8 : KIEL CRIST / RYAN MARTIN

LARAMIE - CASCADE CREEK 697-03-15W - 9 5/8" SURFACE CASING

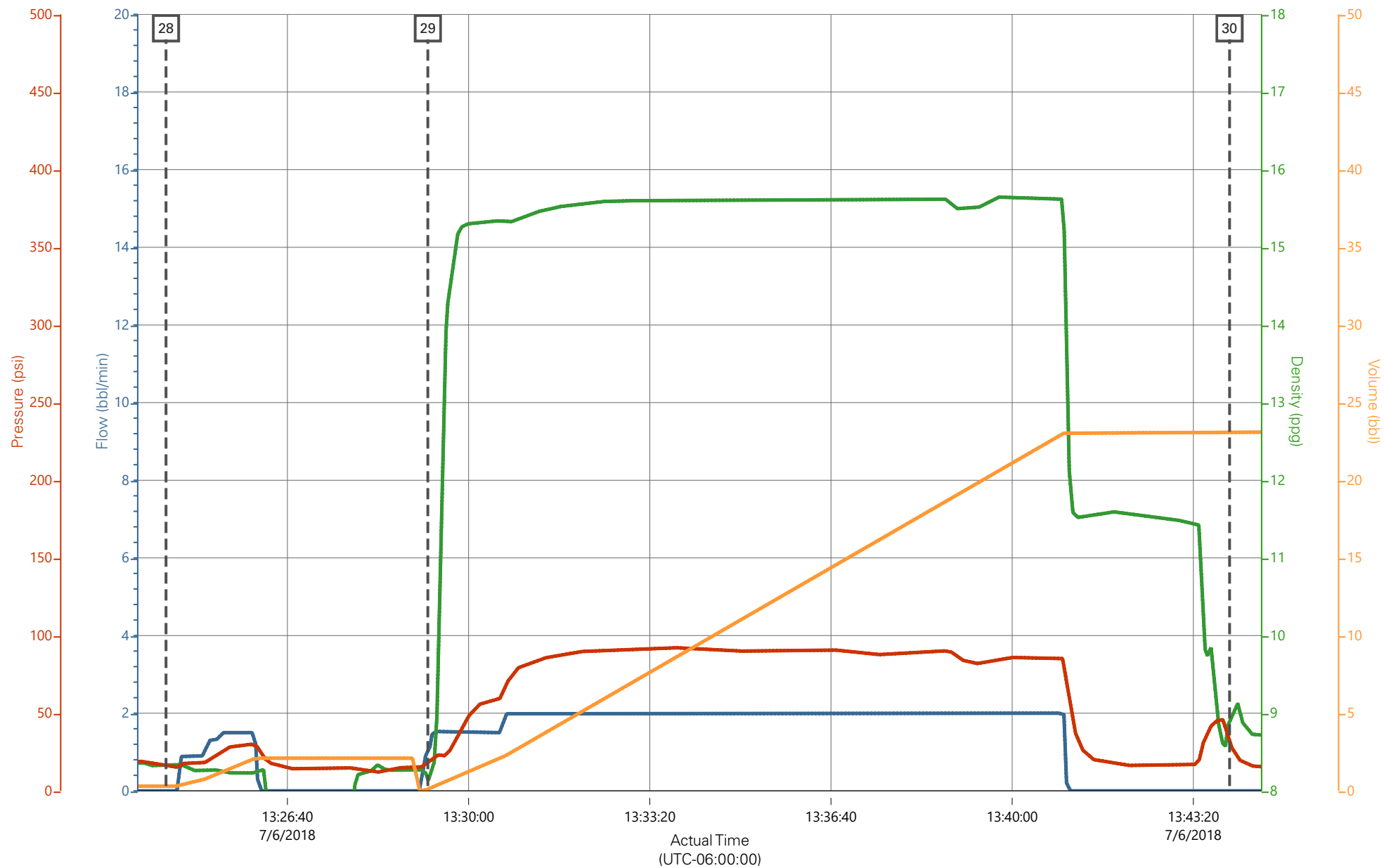


LARAMIE - CASCADE CREEK 697-03-15W - TOP OUT #1



| Description | Actual Time (UTC-06:00:00) | Comb Pump Rate (bbl/min) | DH Density (ppg) | PS Pump Press (psi) | Pump Stg Tot (bbl) |
|----------------|----------------------------|--------------------------|------------------|---------------------|--------------------|
| 28 Start Job | 13:24:26 | 0.00 | 8.34 | 16.00 | 0.30 |
| 29 Pump Cement | 13:29:15 | 0.90 | 8.10 | 17.00 | 0.10 |
| 30 End Job | 13:44:00 | 0.00 | 8.94 | 31.00 | 23.10 |

LARAMIE - CASCADE CREEK 697-03-15W - TOP OUT #1



Comb Pump Rate (bbl/min) 2

DH Density (ppg) 8.31

PS Pump Press (psi) 22

Pump Stg Tot (bbl) 3.9

HALLIBURTON

iCem[®] Service

Laramie Energy LLC

United States of America, COLORADO

For: Laramie

Date: Monday, July 09, 2018

CC 0697-03-15W Production PJR

API #: 05-045-23802

Sincerely,

Grand Junction Cement Engineering

2.0 Real-Time Job Summary

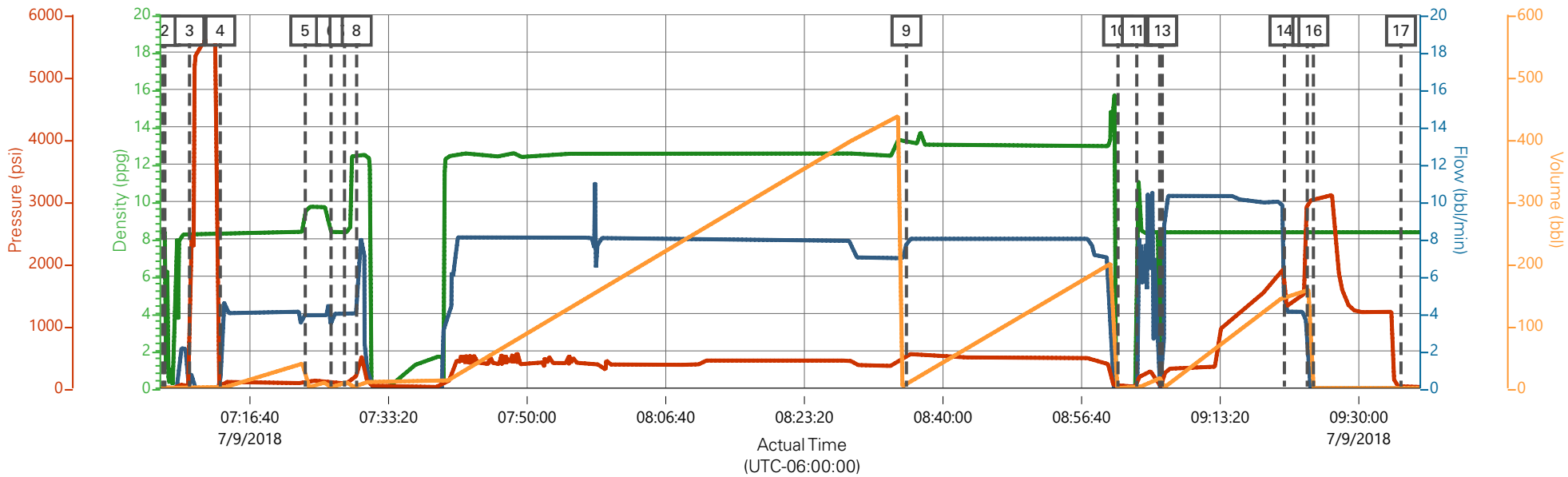
2.1 Job Event Log

| Type | Seq. No. | Graph Label | Date | Time | Source | DH Density (ppg) | Comb Pump Rate (bbl/min) | PS Pump Press (psi) | Pump Stg Tot (bbl) | Comments |
|-------|----------|---------------------------------------|----------|----------|--------|---------------------|-----------------------------|------------------------|-----------------------|--|
| Event | 1 | Call Out | 7/8/2018 | 21:00:00 | USER | | | | | |
| Event | 2 | Pre-Convoy Safety Meeting | 7/9/2018 | 01:10:00 | USER | | | | | JOURNEY MANAGEMENT COMPLETE, AS WELL AS JSA |
| Event | 3 | Crew Leave Yard | 7/9/2018 | 01:30:00 | USER | | | | | |
| Event | 4 | Arrive At Loc | 7/9/2018 | 03:00:00 | USER | | | | | JOURNEY MANAGEMENT CLOSED OUT. RIG RUNNING CASING |
| Event | 5 | Assessment Of Location Safety Meeting | 7/9/2018 | 03:30:00 | USER | | | | | |
| Event | 6 | Pre-Rig Up Safety Meeting | 7/9/2018 | 03:45:00 | USER | | | | | JSA COMPLETE |
| Event | 7 | Rig-Up Equipment | 7/9/2018 | 04:00:00 | USER | | | | | |
| Event | 8 | Other | 7/9/2018 | 05:04:02 | USER | | | | | WATER TEST: PH-7, CL-0, TEMP-64 TP- 9751, TD-9761, S.J.- 82.62, HOLE- 8 3/4, MUD#- 8.9, 9 5/8 36# SET AT 2573 FT. |
| Event | 9 | Pre-Job Safety Meeting | 7/9/2018 | 07:00:00 | USER | | | | | JSA COMPLETE |
| Event | 10 | Start Job | 7/9/2018 | 07:06:11 | COM5 | | | | | |
| Event | 11 | Prime Pumps | 7/9/2018 | 07:06:26 | COM5 | 8.33 | 0.00 | 30.00 | 2.0 | FRESH WATER 2 BBLS TO PRIME LINES TO FLOOR |
| Event | 12 | Test Lines | 7/9/2018 | 07:09:24 | COM5 | 8.33 | 0.00 | 5592 | 2.10 | TESTED TO 5592 PSI |
| Event | 13 | Pump Spacer 1 | 7/9/2018 | 07:13:06 | COM5 | 8.40 | 4.00 | 125.0 | 40.0 | MUD FLUSH |

| | | | | | | | | | | |
|-------|----|----------------------|----------|----------|------|-------|-------|---------|-------|---|
| Event | 14 | Pump Spacer 2 | 7/9/2018 | 07:23:19 | COM5 | 11.7 | 4.00 | 95.0 | 10.0 | SUPERFLUSH |
| Event | 15 | Pump Spacer 1 | 7/9/2018 | 07:26:25 | COM5 | 8.33 | 4.00 | 62.00 | 10.0 | FRESH WATER |
| Event | 16 | Drop Bottom Plug | 7/9/2018 | 07:28:02 | COM5 | | | | | BOTTOM PLUG AWAY |
| Event | 17 | Pump Lead Cement | 7/9/2018 | 07:29:30 | COM5 | 12.50 | 8.00 | 450.0 | 373.8 | 1082 SKS, 1.94 FT3/SK, 9.59 GAL/SK HAD TO SHUTDOWN ON FIRST TUB OF LEAD DUE TO THE MIXING TUB POWDERING OFF. |
| Event | 18 | Pump Tail Cement | 7/9/2018 | 08:35:36 | COM5 | 13.00 | 8.00 | 508.00 | 168.0 | 465 SKS, 2.07 FT3/SK, 9.41 GAL/SK |
| Event | 19 | Shutdown | 7/9/2018 | 09:01:03 | COM5 | | | | | TO WASH UP PUMPS AND LINES TO CELLAR |
| Event | 20 | Clean Lines | 7/9/2018 | 09:03:18 | COM5 | | | | | TO CELLAR |
| Event | 21 | Drop Top Plug | 7/9/2018 | 09:06:03 | COM5 | | | | | TOP PLUG AWAY |
| Event | 22 | Pump Displacement | 7/9/2018 | 09:06:22 | COM5 | 8.33 | 10.00 | 1950.0 | 149.8 | FRESH WATER WITH 1 GAL MMCR, 5 GAL CLA-WEB |
| Event | 23 | Slow Rate | 7/9/2018 | 09:21:03 | COM5 | 8.33 | 4.00 | 1268.00 | 139.0 | SLOW RATE TO BUMP TOP PLUG |
| Event | 24 | Bump Plug | 7/9/2018 | 09:23:48 | COM5 | 8.33 | 4.00 | 1530.0 | 149.8 | PLUG BUMPED |
| Event | 25 | Casing Test | 7/9/2018 | 09:24:32 | COM5 | | | 3070.00 | | CASING TEST FOR 10 MINS. STARTED GOOD AT 3070 PSI THEN DROPPED TO 1230 PSI. |
| Event | 26 | Check Floats | 7/9/2018 | 09:35:04 | USER | | | | | FLOATS HELD, 0.5 BBLS BACK TO TRUCK |
| Event | 27 | Pump Parasite string | 7/9/2018 | 09:51:07 | COM5 | 15.6 | 1.60 | 65.0 | 6.0 | 30 SKS, 15.6 PPG, 1.18 FT3/SK, 5.22 GAL/SK |
| Event | 28 | Shutdown | 7/9/2018 | 09:56:32 | COM5 | | | | | |
| Event | 29 | End Job | 7/9/2018 | 09:56:42 | COM5 | | | | | GOOD RETURNS UNTILL DISPLACEMENT |

| | | | | | | |
|-------|----|---|----------|----------|------|--|
| Event | 30 | Post-Job Safety Meeting (Pre Rig-Down) | 7/9/2018 | 10:00:00 | USER | JSA COMPLETE |
| Event | 31 | Crew Leave Location | 7/9/2018 | 11:30:00 | USER | THANK YOU FOR USING HALLIBURTON CEMENT, JAMES LEIST AND CREW |

Custom Results



DH Density (ppg)

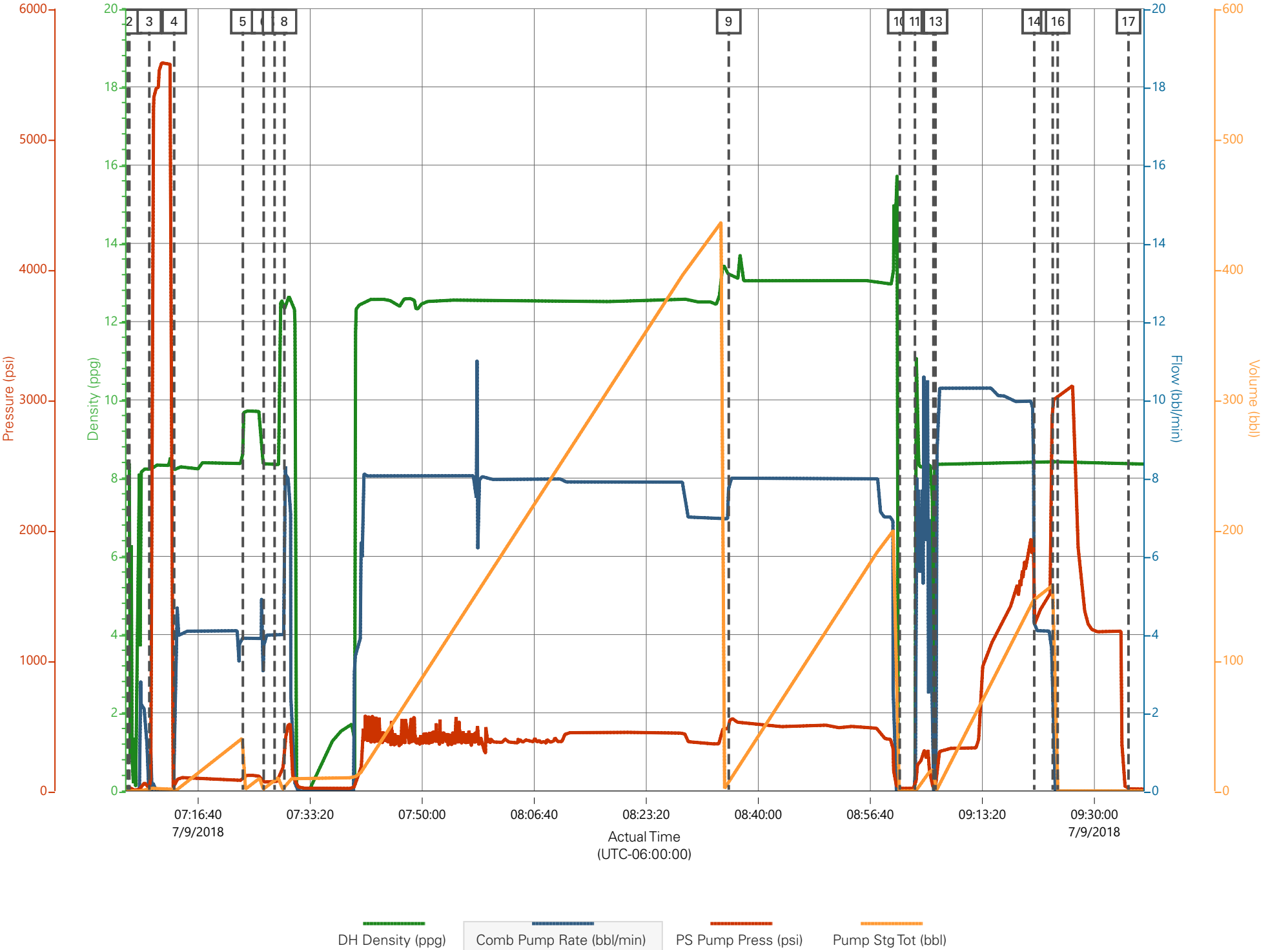
Comb Pump Rate (bbl/min)

PS Pump Press (psi)

Pump Stg Tot (bbl)

| Description | Actual Time (UTC-06:00:00) | DH Density (ppg) | Comb Pump Rate (bbl/min) | PS Pump Press (psi) | Pump Stg Tot (bbl) |
|----------------------|-------------------------------|------------------|--------------------------|---------------------|--------------------|
| 1 Start Job | 07:06:11 | 8.37 | 0.00 | 39.00 | 0.00 |
| 2 Prime Pumps | 07:06:26 | 8.37 | 0.00 | 30.00 | 0.00 |
| 3 Test Lines | 07:09:24 | 8.22 | 0.00 | 20.00 | 2.10 |
| 4 Pump Spacer 1 | 07:13:06 | 8.21 | 0.10 | 24.00 | 0.00 |
| 5 Pump Spacer 2 | 07:23:19 | 8.95 | 3.90 | 83.00 | 40.80 |
| 6 Pump Spacer 1 | 07:26:25 | 8.35 | 3.70 | 62.00 | 1.70 |
| 7 Drop Bottom Plug | 07:28:02 | 8.37 | 4.00 | 76.00 | 8.10 |
| 8 Pump Lead Cement | 07:29:30 | 12.27 | 4.00 | 187.00 | 2.60 |
| 9 Pump Tail Cement | 08:35:36 | 13.26 | 7.80 | 508.00 | 6.50 |
| 10 Shutdown | 09:01:03 | 0.05 | 0.00 | 21.00 | 0.00 |
| 11 Clean Lines | 09:03:18 | 0.16 | 0.00 | 26.00 | 0.00 |
| 12 Drop Top Plug | 09:06:03 | 0.60 | 0.00 | 19.00 | 16.20 |
| 13 Pump Displacement | 09:06:22 | 8.45 | 0.00 | 11.00 | 0.00 |
| 14 Slow Rate | 09:21:03 | 8.39 | 4.10 | 1268.00 | 147.20 |
| 15 Bump Plug | 09:23:48 | 8.42 | 0.00 | 2993.00 | 157.90 |

Custom Results



DH Density (ppg) Comb Pump Rate (bbl/min) PS Pump Press (psi) Pump Stg Tot (bbl)

Job Information

| | | | | | |
|-----------------------|-----------------|-----------------|-------------------|-------------------|---------------------------|
| Request/Slurry | 2484978/1 | Rig Name | H&P 522 | Date | 01/JUL/2018 |
| Submitted By | Connor Matthews | Job Type | Production Casing | Bulk Plant | Grand Junction |
| Customer | Laramie Energy | Location | Garfield | Well | Cascade Creek 0697-03-15W |

Well Information

| | | | | | |
|--------------------------|----------|------------------|---------|-------------|---------------|
| Casing/Liner Size | 4.5 in | Depth MD | 9858 ft | BHST | 117°C / 242°F |
| Hole Size | 8.75 in | Depth TVD | 9529 ft | BHCT | 78°C / 172°F |
| Pressure | 5970 psi | | | | |

Drilling Fluid Information

| | | |
|--------------------------|-----------------------|----------------|
| Mud Supplier Name | Mud Trade Name | Density |
|--------------------------|-----------------------|----------------|

Cement Information - Lead Design

| <u>Conc</u> | <u>UOM</u> | <u>Cement/Additive</u> | <u>Sample Type</u> | <u>Sample Date</u> | <u>Lot No.</u> | Cement Properties | | |
|-------------|------------|------------------------|--------------------|--------------------|----------------|--------------------------|-------------|----------|
| | | NeoCem | | | | Slurry Density | 12.5 | lbm/gal |
| | | | | | | Slurry Yield | 1.946 | ft3/sack |
| | | | | | | Water Requirement | 9.615 | gal/sack |
| | | | | | | Total Mix Fluid | 9.615 | gal/sack |
| | | | | | | Water Source | Fresh Water | |
| | | | | | | Water Chloride | | |

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Operation Test Results Request ID 2484978/1

Thickening Time - ON-OFF-ON

08/JUL/2018

| Test Temp (degF) | Pressure (psi) | Reached in (min) | 30 Bc (hh:min) | 50 Bc (hh:min) | 70 Bc (hh:min) | 100 Bc (hh:min) | Start Bc | Stirring before stop (mins) | Static Period (min) | Peak reading (BC) |
|---------------------|-------------------|---------------------|-------------------|-------------------|-------------------|--------------------|----------|-----------------------------------|---------------------------|-------------------------|
| 172 | 5970 | 48 | 3:55 | 4:34 | 4:46 | 5:33 | 7 | 58 | 15 | 13 |

Total SKS = 1082

CS1453, Trailer 7428, 282 sks

CS1456, Trailer 8658, 400 sks

CS1457, Trailer 8476, 400sks

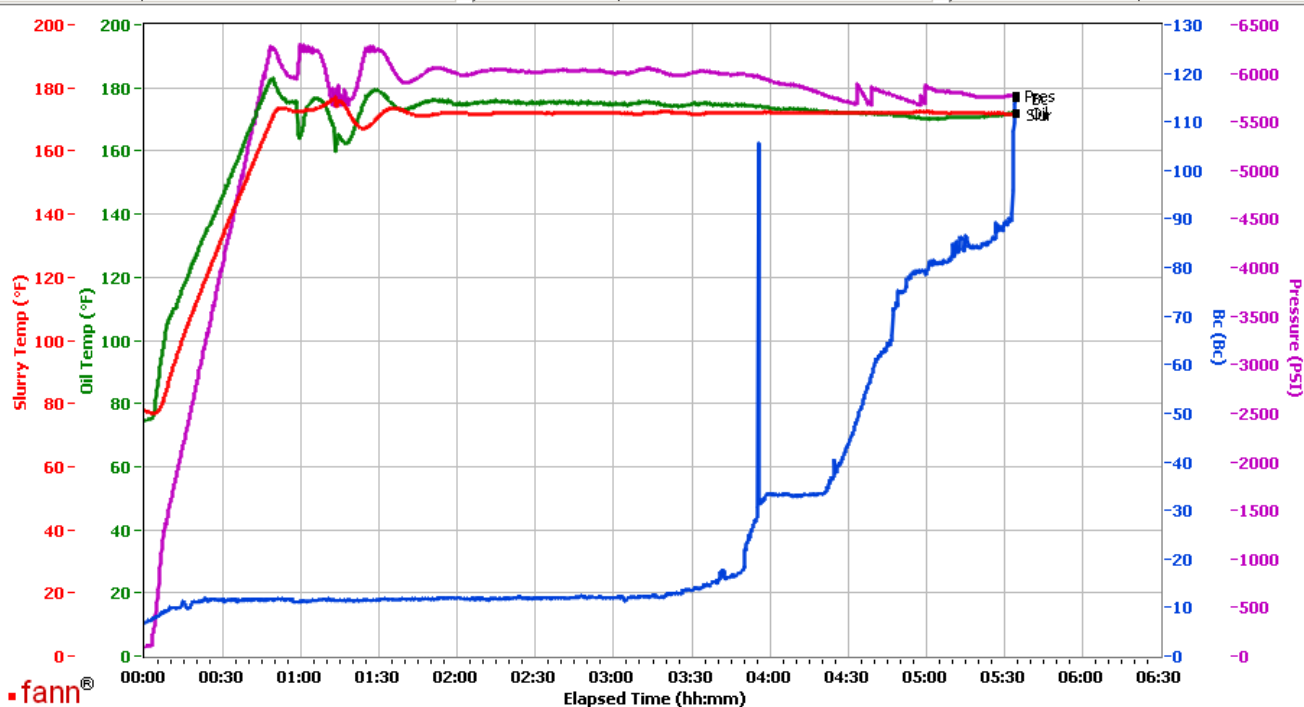
deflected from 12Bc-- > 13Bc

Grand Junction Colorado

| Fields | Values |
|-------------------|-------------------------------------|
| Project Name | GJ2484978-1 LARAMIE BULK PRODUCTION |
| Test ID | 35624402 - TT |
| Request ID | 2484978-1 |
| Tested by | CT |
| Customer | LARAMIE ENERGY |
| Well No | CASCADE CREEK 0697-03-15W |
| Rig | H&P 522 |
| Casing/Liner Size | 4.5 INCH |

| Fields | Values |
|----------------|-------------------|
| Job Type | PRODUCTION CASING |
| Cement Type | GCC TYPE I-II |
| Cement Weight | Standard |
| Test Date | 07/08/18 |
| Test Time | 02:25 AM |
| Temp. Units | degF |
| Pressure Units | PSI |
| SW Version | 2.1.0.507 |

| Events | Results |
|-----------|----------|
| 30.00 Bc | 03h:55m |
| 40.00 Bc | 04h:27m |
| 50.00 Bc | 04:34h:m |
| 70.00 Bc | 04h:46m |
| 100.00 Bc | 05h:33m |
| 00h:30m | 11.54 |
| 01h:00m | 11.42 |
| 01h:30m | 11.74 |



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\0HU90BIZ\GJ2484978-1 LARAMIE BULK PRODUCTION LEAD[1].tdms

Comments CS1453, TRAILER 7428, 282 SKS - CS1456, TRAILER 8658, 400 SKS - CS1457, TRAILER 8476, 400 SKS

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HALLIBURTON

Rockies, Grand Junction

Lab Results- Tail

Job Information

| | | | | | |
|-----------------------|-----------------|-----------------|-------------------|-------------------|---------------------------|
| Request/Slurry | 2484979/1 | Rig Name | H&P 522 | Date | 01/JUL/2018 |
| Submitted By | Connor Matthews | Job Type | Production Casing | Bulk Plant | Grand Junction |
| Customer | Laramie Energy | Location | Garfield | Well | Cascade Creek 0697-03-15W |

Well Information

| | | | | | |
|--------------------------|----------|------------------|---------|-------------|---------------|
| Casing/Liner Size | 4.5 in | Depth MD | 9858 ft | BHST | 117°C / 242°F |
| Hole Size | 8.75 in | Depth TVD | 9529 ft | BHCT | 78°C / 172°F |
| Pressure | 5970 psi | | | | |

Drilling Fluid Information

| | | |
|--------------------------|-----------------------|----------------|
| Mud Supplier Name | Mud Trade Name | Density |
|--------------------------|-----------------------|----------------|

Cement Information - Tail Design



| <u>Conc</u> | <u>UOM</u> | <u>Cement/Additive</u> | <u>Sample Type</u> | <u>Sample Date</u> | <u>Lot No.</u> | Cement Properties | | |
|-------------|------------|------------------------|--------------------|--------------------|----------------|--------------------------|-------------|----------|
| | | NeoCem | | | | Slurry Density | 13 | lbm/gal |
| | | | | | | Slurry Yield | 2.069 | ft3/sack |
| | | | | | | Water Requirement | 9.408 | gal/sack |
| | | | | | | Total Mix Fluid | 9.408 | gal/sack |
| | | | | | | Water Source | Fresh Water | |
| | | | | | | Water Chloride | N/A | |

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Operation Test Results Request ID 2484979/1

Thickening Time - ON-OFF-ON

08/JUL/2018

| Test Temp (degF) | Pressure (psi) | Reached in (min) | 30 Bc (hh:min) | 50 Bc (hh:min) | 70 Bc (hh:min) | 100 Bc (hh:min) | Start Bc | Stirring before stop (mins) | Static Period (min) | Peak reading (BC) |
|---------------------|-------------------|---------------------|-------------------|-------------------|-------------------|--------------------|----------|-----------------------------------|---------------------------|-------------------------|
| 172 | 5970 | 48 | 3:09 | 3:19 | 3:21 | 3:26 | 9 | 58 | 15 | 10 |

Total SKS= 456

CS1454, Trailer 1513, 356 sks

CS1455, Trailer 1972, 100 sks

no deflection, 10Bc---- > 10Bc

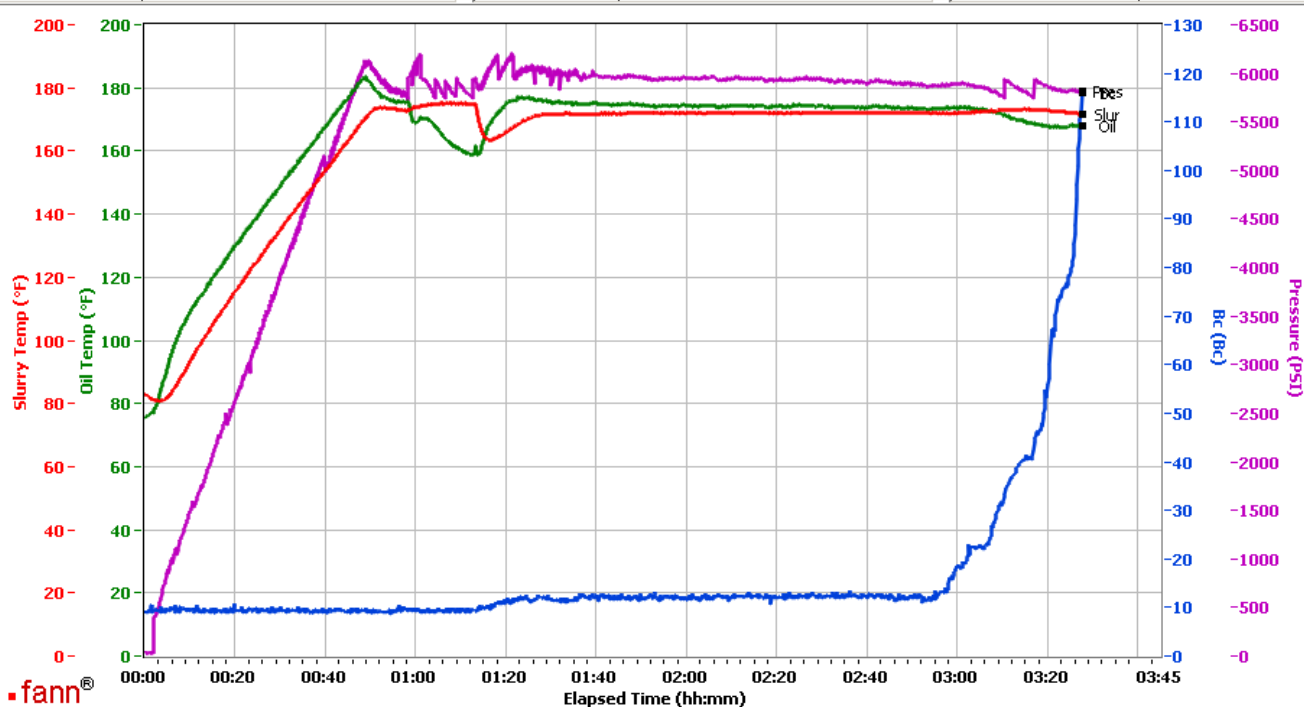
heat of hydration at 3:10

Grand Junction, Colorado

| Fields | Values |
|-------------------|-------------------------------------|
| Project Name | GJ2484979-1 LARAMIE BULK PRODUCTION |
| Test ID | 35624404 - TT |
| Request ID | 2484979-1 |
| Tested by | CT |
| Customer | LARAMIE ENERGY |
| Well No | CASCADE CREEK 0697-03-15W |
| Rig | H&P 522 |
| Casing/Liner Size | 4.5 INCH |

| Fields | Values |
|----------------|-------------------|
| Job Type | PRODUCTION CASING |
| Cement Type | GCC TYPE I-II |
| Cement Weight | Standard |
| Test Date | 07/08/18 |
| Test Time | 7:41PM |
| Temp. Units | degF |
| Pressure Units | PSI |
| SW Version | 2.1.0.507 |

| Events | Results |
|-----------|---------|
| 30.00 Bc | 03h:09m |
| 40.00 Bc | 03h:14m |
| 50.00 Bc | 03h:19m |
| 70.00 Bc | 03h:21m |
| 100.00 Bc | 03h:26m |
| 00h:30m | 9.56 |
| 01h:00m | 9.73 |
| 01h:30m | 11.55 |



Data File C:\Documents and Settings\M290\Local Settings\Temporary Internet Files\Content.IE5\H27OCB56\GJ2484979-1 LARAMIE BULK PRODUCTION TAIL[1].tdms

Comments CS1454, TRAILER 1513, 356 SKS - CS1455, TRAILER 1972, 100 SKS

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